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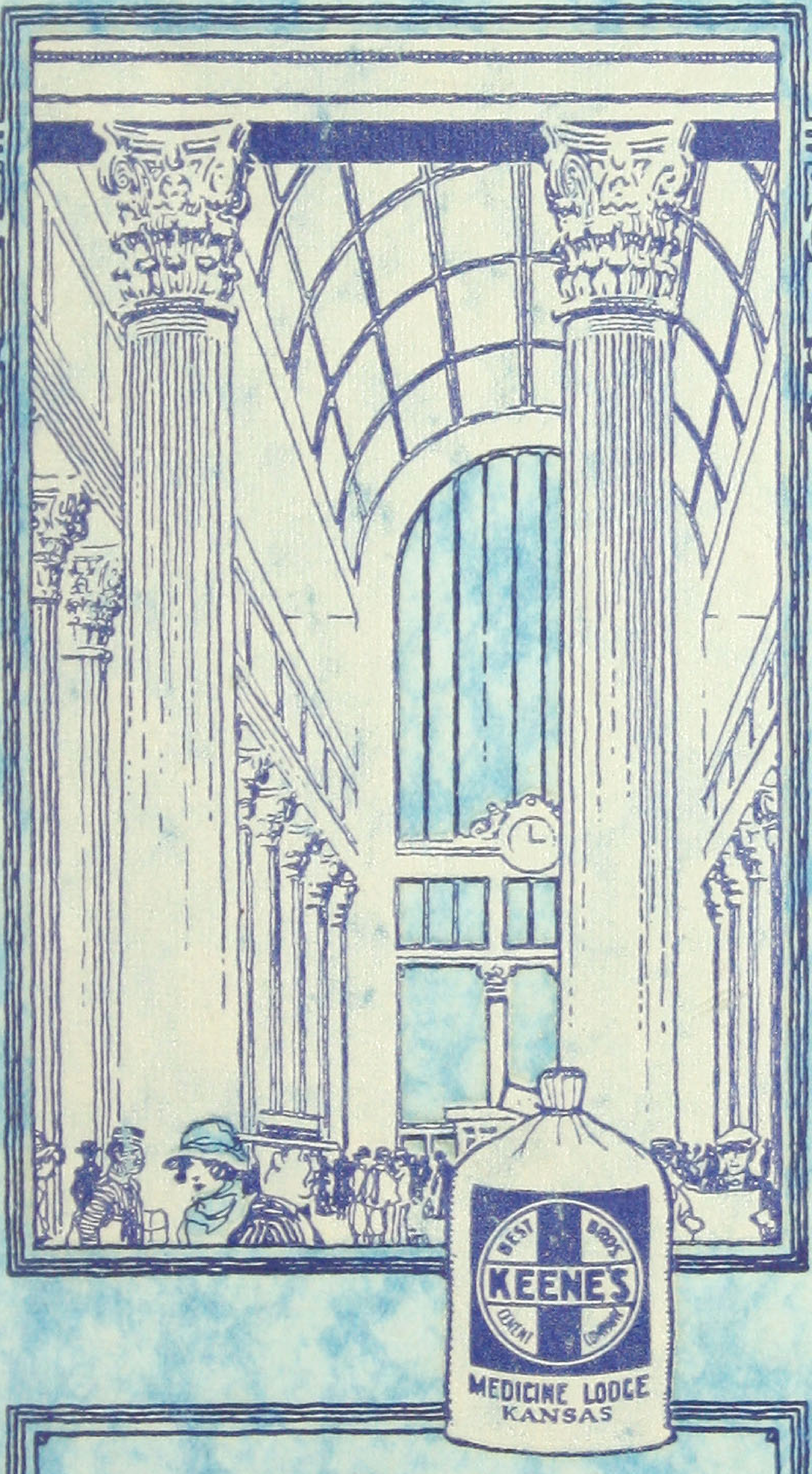
BEST BROS.
KEENE'S CEMENT



Dealers' Information
Architects' Specifications
and Plasterers' Quantities

OCT 19 '25

The Best Bros. Keene's Cement Company

"Look For This Sack"

The original manufacturers of **Keene's Cement** in the United States, and the only firm in America making **Keene's Cement** exclusively.

THE BEST BROS. KEENE'S CEMENT CO.
Est. 1889—Inc. 1907
MEDICINE LODGE, KANSAS
New York Chicago

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This is the reason why our factory is located at
MEDICINE LODGE, KANSAS

"A corner of No. 3 quarry."

The first essential in manufacturing **Keene's Cement** is purity of the raw material. Government field tests show the rock in our quarries to be practically pure calcium sulphate.

We know of no other deposit like it, either in purity or extent.

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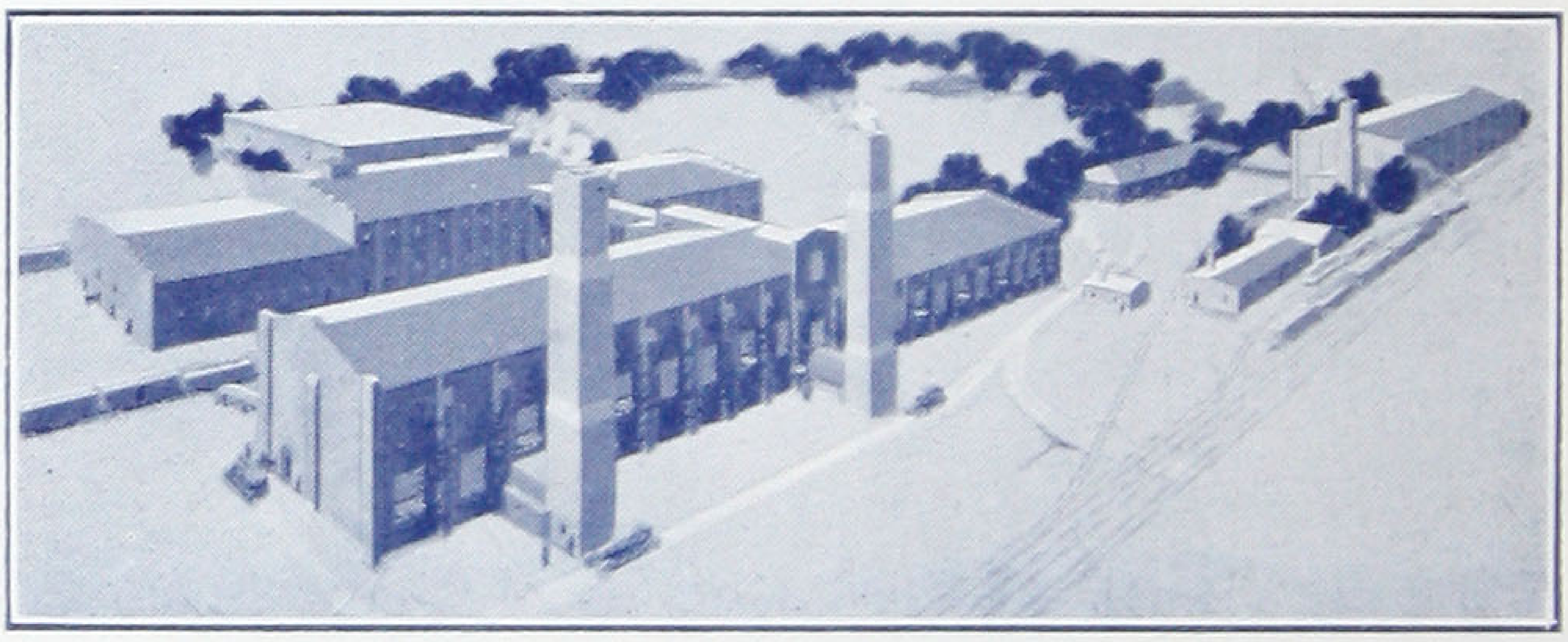
Where Best Bros. Keene's Cement Is Made

Partial view of the factory at Medicine Lodge, Kans.



In the center is the Kiln Building, where the rock is received from the quarries and calcined. On the left is No. 3 mill, where the "**Regular**" and "**Fine**" grades are made. On the right is No. 1 mill, where the "**Superfine**" and "**Quickset**" grades are produced.

Four private switch tracks serving the mills and warehouses give ample facilities for prompt shipment.

Made in Four Grades

Best Bros. Keene's "Regular" is the grade used for all general plastering and finishing purposes.

Best Bros. Keene's "Fine" is made from specially selected, hand picked rock, to insure purity of color, and is ground somewhat finer than the **"Regular"** grade. It is used for wainscots, finishing columns, etc. It is extensively employed in the manufacture of Caen Stone and Travertine finish, and is also used for backing up Artificial Marble (Scagliola).

Best Bros. Keene's "Quickset" is used for castings, running mouldings, and other forms of ornamental plastering where the shorter setting time of this grade is of advantage.

Best Bros. Keene's "Superfine" is used only for facing Scagliola or Artificial Marble. It is slow setting; pure white, air floated to uniform fineness, and of high tensile strength.

The setting time of a cement will vary somewhat according to atmospheric and other conditions. The figures given below are the average setting time of various grades of **Best Bros. Keene's Cement** as established by thousands of tests in our laboratories under uniform conditions. The tensile strength figures are the minimum requirements that we have established for the various grades. The average run of **Best Bros. Keene's Cement** will exceed these figures by at least 25%.

	"Regular"	*"Fine"*	*"Quickset"*	*"Superfine"*
Tensile strength in lbs. per sq. inch, 14 days in air	400	450	450	550
Setting time: Initial, hours	2	2	1	3
Final, hours	4	4	2	6

Gilmore test.

What Best Bros. Keene's Cement Is

Best Bros. Keene's Cement is not a retarded hard plaster, but is a real cement, possessing two unusual and very valuable qualities. One is the fact that it can be stored for years if necessary, without losing any part of its strength or deteriorating in any way. The other is that it can be retempered. **Best Bros. Keene's Cement** does not "kill", however often it is remixed.

In this article, we tell you just what **Best Bros. Keene's Cement** is, and how it differs from other forms of plaster.

With the exception of lime, practically all materials used for interior plastering have for their base the material called Gypsum, which is known chemically as calcium sulphate. In its purest natural state, as in our quarries, this material is found in the form of a closely grained, white rock formation, in veins of considerable thickness. It is only the purest form of gypsum that can be used for making **Keene's Cement.**

In its natural form, gypsum contains about 21% of water of crystallization, and in making ordinary plasters, about three-fourths of this water is driven off by a cooking process. This is done at a comparatively low temperature, about 360°; should the temperature be allowed to rise much above this point, the material becomes "dead burned" and loses most of its setting properties.

Driving off three-fourths of the water from gypsum in this way, leaves a very quick-setting material known as plaster of paris. This is the basis of practically all hard plasters, also of dental, casting, moulding and other forms of quick-setting plaster. To make this plaster of paris into hard plaster, some retarder has to be added, usually of a colloidal nature, which holds back the crystallization of the plaster long enough for it to be mixed and applied to the walls.

Plaster of paris, or any plaster made from it, is "thirsty" for water. It will pick up moisture from the air, and when it has picked up a certain quantity, it loses some of its setting properties. This is why plaster of paris or hard plaster must be used while comparatively fresh.

In making **Best Bros. Keene's Cement** the rock is calcined at a temperature many hundreds of degrees higher than that used in making hard plaster. It is necessary to do this in order to get out the last 5% of water that is left in the Gypsum. Even at this temperature, the material still has certain setting properties, but it is too slow for commercial use. A small amount of a catalyser is added, which does not have any effect on the material except to bring about a shorter setting time than the cement would otherwise have.

Gypsum that has had all the water of crystallization taken out of it, is no longer "thirsty", and does not have any affinity for atmospheric moisture. This is the reason **Best Bros. Keene's Cement** does not go dead, but will keep in perfect condition for years.

Hard plaster is therefore a naturally quicksetting material that has been retarded, while **Best Bros. Keene's Cement** is a naturally slow setting cement, without having any form of retarder added.

RETEMPERING—Plaster of paris, or any hard plaster made from it, does not possess the property of retempering because of the way in which it sets. When plaster of paris is mixed with water, the small particles of gypsum dissolve in the water, and make a saturated solution from which the particles crystallize out in much the same way as rock candy crystallizes on a piece of string. The water then being left clear, more particles of the plaster dissolve in it and crystallize out, and the process is continued until the water has dissolved all the particles of plaster that it can do, and the mixture "sets". If this process of crystallization is interfered with, and the material is broken down and remixed, the process stops, and cannot be resumed, so that the plaster does not actually set and obtain its full strength, but merely dries out.

In **Best Bros. Keene's Cement** the process of crystallization takes place around, and in the presence of, the small percentage of catalyser that has been added. Breaking down and remixing **Best Bros. Keene's Cement** does not interfere with the set, as the catalytic agent is still there to act as a nucleus for the process of crystallization. This is the reason why **Best Bros. Keene's Cement** can be retempered as often as necessary.

It is on account of this retempering property that **Best Bros. Keene's Cement** can be used so successfully in conjunction with lime. A mixture of **Best Bros. Keene's Cement** and lime can be retempered because the two materials separately possess this quality. This is the only plastic material that can be used as a gauging in lime mortar, and still retain the valuable retempering quality of the lime mortar.

Best Bros. Keene's Cement has from two to three times the strength of other forms of gypsum plaster. It keeps indefinitely—can be retempered as often as necessary—and can be polished to a marble-like surface.

Advantages of Best Bros. Keene's Cement

Best Bros. Keene's Cement will keep indefinitely if stored in a dry warehouse. It does not deteriorate with age, but on the contrary, improves.

Best Bros. Keene's Cement can be retempered as often as necessary. If it starts to set up, just add a little water and remix. You can't "kill" **Best Bros. Keene's Cement.**

Best Bros. Keene's Cement is the best gauging material yet discovered for lime mortar. It forms a tough, durable wall, with excellent acoustic properties. It shortens the setting time and makes a much stronger wall than straight lime mortar, without affecting the smooth-spreading and retempering qualities of the lime mortar.

Best Bros. Keene's Cement, when used for the base coat, protects metal lath, and positively prevents corrosion.

Best Bros. Keene's Cement is easily applied when mixed according to our specifications, and will bond perfectly with concrete walls and ceilings.

Best Bros. Keene's Cement can be polished to a marble-like finish. It is extensively used for Artificial Marble (Scagliola), Caen Stone and Travertine Finish, and other decorative effects.

Best Bros. Keene's Cement is non-resonant, because it absorbs, and does not reflect, sound waves.

Best Bros. Keene's Cement has the same fire-resisting qualities possessed by most materials made from a gypsum base.

Best Bros. Keene's Cement is absolutely sanitary, and is largely used for schools, hospitals, theatres and other gathering places.

Best Bros. Keene's Cement can be applied satisfactorily as a finish coat over a base coat of hard plaster, although better results are obtained if both base and finish coats are done with **Best Bros. Keene's Cement.**

Best Bros. Keene's Cement is permanent. It sets slowly and hardens slowly, and a wall plastered with it grows tougher and more durable the longer it stands.

Best Bros. Keene's Cement is inert and forms an ideal base for painting or enameling. It can be decorated as soon as it is dry, without affecting the most delicate colors.

Best Bros. Keene's Cement can be worked over thoroughly until all marks of joinings or other inequalities are removed. As it can be retempered, there is no danger of its going "dead," thus avoiding a fruitful source of future trouble.

Named after the discoverer of the process, **"Keene's" Cement** has for more than three-quarters of a century been the acknowledged standard in plastering materials.

We have spent 36 years in bringing **Best Bros. Keene's Cement** to its present state of perfection. The experience and reputation for high quality and fair dealing that we have acquired in that period stand behind every sack of material shipped under our brand.

Note

When you place an order for **Keene's Cement,** be sure you are getting **Best Bros. Keene's Cement.** Here is a picture of our sack.

Do not accept a package bearing any other brand!

Specifications Suitable for the Use of Architects

PLASTERING

All plastering shall be done with **Best Bros. Keene's Cement** mixed and applied according to the specifications of the manufacturer, provided they do not conflict with the requirements herein.

THREE COAT WORK

(*On Wood or Metal Lath*)

(a) SCRATCH COAT shall be mixed in the following proportions: To 160 pounds of lime putty add 700 pounds (42 No. 2 shovels) of sand and plenty of good, well beaten, water soaked cattle hair. Gauge this mixture with one (1) bag of **Best Bros. Keene's "Regular"** of 100 pounds weight.

(b) BROWN COAT shall be mixed in the following proportions: To 180 pounds of lime putty add 1,050 pounds (63 No. 2 shovels) of sand, and gauge this mixture with one (1) bag of **Best Bros. Keene's "Regular"** of 100 pounds weight.

TWO COAT WORK

(*On Tile, Brick or Gypsum Block*)

(a) BROWN (OR BASE) COAT shall be mixed in the following proportions: To 150 pounds of lime putty add 1,000 pounds (60 No. 2 shovels) of sand, and gauge this mixture with one (1) bag of **Best Bros. Keene's "Regular"** of 100 pounds weight.

TWO COAT WORK

(*On Concrete Walls and Ceilings*)

(a) BROWN (OR BASE) COAT shall be mixed in the following proportions: To 80 pounds of lime putty add 450 pounds (27 No. 2 shovels) of sand, and gauge this mixture with one (1) bag of **Best Bros. Keene's "Regular"** of 100 pounds weight.

FINISH COATS

Sec. 1. SMOOTH FINISH. To each 100 pounds of **Best Bros. Keene's "Regular"** add 80 pounds of lime putty.

Sec. 2. SAND FLOAT FINISH. To 120 pounds of lime putty add 400 pounds (24 No. 2 shovels) of sand, and gauge this mixture with one (1) bag of **Best Bros. Keene's "Regular"** of 100 pounds weight.

SMOOTH HARD FINISH

(For bathroom wainscots and similar work)

The finish coat shall be mixed in proportions of 400 pounds of **Best Bros. Keene's "Regular"** and 100 pounds of lime putty. (If an extra hard white finish is required, use **Best Bros. Keene's "Regular"** neat with no lime to be added.)

BRICK AND TILE SURFACES

All brick and tile surfaces shall be thoroughly broomed off and washed before the mortar is applied, and shall be damp when it is applied.

CONCRETE SURFACES

New concrete must not be plastered until it is dry. All dust and loose particles shall be removed from concrete or cement surfaces by brushing well with a wire brush. The surfaces shall be washed with clean water and kept moist while the plaster is being applied. Should the concrete surfaces be oily or gummy, they must be washed with a 10% solution of muriatic acid and water (one quart of acid to a bucket of water), and washed out with clean water within twenty minutes after the acid solution is applied.

This coat must be laid on with a trowel or wooden float, and not touched again except to knock off the rough edges with the float. Great care must be exercised in applying the base coat to concrete. It must be laid on in one operation and not touched again, for if the coat is moved in any way the bond is broken.

Any plastered surfaces that are loose and not properly attached to the concrete after the mortar has dried out must be cut out and done over again, and sufficient area shall be thus removed to make a uniform surface without having the appearance of patch work.

Finish coat should never be applied direct to concrete walls or ceilings.

GROUNDS

On wood lath grounds shall be ⅞ inch; on metal lath, ⅝ inch; on brick or tile, ½ inch.

SAND

Must be screened, clean and sharp; free from loam, quicksand or other impurities.

LIME

Hydrated lime shall be soaked in water-tight boxes for at least 24 hours before using.

Lump lime shall be well slaked; run through a sieve of $\frac{1}{16}$ inch mesh, and properly stored and protected for a sufficient time before using to ensure all particles being thoroughly slaked.

LATHING

Metal lath shall be either painted or galvanized. Wood lath shall be of a good grade, free from knots, sap and bark (white pine preferred). It shall be thoroughly dampened shortly before plaster is applied.

Specifications

For Ornamental Work

LATHING

If the work is to be applied to lathed surfaces, only coated or galvanized metal lath shall be used.

PLASTERING

Scratch and Brown Coats shall be mixed in the same proportions as specified for wall surfaces (see pages 10 and 11). Allow scratch coat to dry and brown out to within one-fourth inch of the finish coat with a muffled mould. The finish coat shall be applied while the brown coat is green.

RUN WORK

All mouldings, window stools, door and window trim and work of like character shall be run in **Best Bros. Keene's "Fine"**.

Mouldings shall be run straight and true, using metal templates with profiles as given on full sized details.

CORNICES

The finish coat for cornices shall be mixed in proportions of 400 pounds **Best Bros. Keene's "Fine"** and 200 pounds of lime putty.

CAST WORK

Ornamental work of every kind, excepting run mouldings and cornices as previously specified, shall be cast with **Best Bros. Keene's "Fine"** used neat. (The contractor shall have the option of using **Best Bros. Keene's "Quickset"** in place of the **"Fine"** for this work.) Add only sufficient water to bring it to the consistency of a thick paste. It shall be thoroughly pressed and worked into place, making all members neat and clean. All castings shall be set in place and securely anchored as hereinbefore specified.

SCAGLIOLA WORK

(*Artificial Marble*)

Scagliola columns, pilasters, walls, etc., shall be browned out to a true and even surface with a brown coat mixed in the following proportions:

To 160 pounds of lime putty, add 700 pounds (42 No. 2 shovels) of sand, and plenty of good, well beaten, water soaked cattle hair. Gauge this mixture with one (1) bag of **Best Bros. Keene's "Regular"** of 100 pounds weight.

This work shall be done by the plastering contractor under the supervision of the contractor for the Scagliola work.

After the base coat is dry, the Scagliola contractor shall apply a brown coat of **Best Bros. Keene's "Fine"** mixed with marble dust in the proportions of 2 parts of **Best Bros. Keene's "Fine"** to 3 parts of marble dust. This brown coat shall be brought out to a thickness of $\frac{5}{8}$ of an inch.

The facing, or finish, coat shall be $\frac{3}{16}$ of an inch thick, and shall be composed of **Best Bros. Keene's "Superfine"** with sufficient dry colors to produce a correct reproduction of the type of marble specified. This finish coat shall be stoned with Bimmstein, Scotch hones and razor hones, and shall be filled between the different stonings.

This finish coat shall be polished with putty powder, oxalic acid and alcohol, and shall be brought to a high polish. No shellac or french polish will be accepted.

Where Scagliola work is to be pre-cast, it shall be cast in moulds with a facing composed of **Best Bros. Keene's "Superfine"** as specified hereinbefore, and shall be backed up to the required thickness with a mixture composed of 2 parts of **Best Bros. Keene's "Fine"** and 3 parts of marble dust, and shall be reinforced with burlap.

NOTE TO THE ARCHITECT

The above specification is designed to secure the highest class of Scagliola work that can be produced. It has been approved by several large contractors who have a well-earned reputation for the quality of their Scagliola work.

The use of marble dust in the brown coat gives a toughness and firmness to the slab or casting, which cannot be secured by the use of sand.

While shellac and french polish are cheaper finishes than the method specified by us, they do not produce as high or as permanent a finish, nor can they be cleaned and repolished as well as a finish produced by the method outlined in our specifications.

We know of work done by this method a quarter of a century ago, that is still in excellent condition.

Each piece of rock used in making the "Superfine" grade for Scagliola, is cleaned by hand, as shown above.

PLASTERERS' QUANTITIES

NOTE: In presenting the following figures, we have not attempted to give, in the base coats, the quantities necessary to cover a given surface, but show instead the quantities necessary to produce a cubic yard of mortar. Each plasterer usually has his own idea as to how much surface a cubic yard of mortar will cover over different bases.

By this method, the plasterer can use his own figures as to the number of cubic yards of mortar required for a job, and by referring to the quantities shown below, can then determine accurately the quantities of **Best Bros. Keene's Cement,** lime, sand and hair needed for any specific work. The amount of sand is the real unit of measurement in plastering; the other ingredients merely fill the voids in the sand, and add very little extra bulk to it.

For mixing up individual batches, the plasterer can take one-fourth, one-third, or any other proportion he prefers, of the quantities listed herein. For large jobs, there is marked economy in using a power mixer.

GROUNDS

Wood lath, ⅞ inch; metal lath, ⅝ inch; brick or tile ½ inch.

SAND

Must be screened, clean and sharp; free from loam, quicksand or other impurities.

LIME

Hydrated lime shall be soaked in watertight boxes for at least 24 hours before using.

Lump lime shall be well slaked; run through a sieve of 1/16 inch mesh, and properly stored and protected for a sufficient time before using to ensure all particles being thoroughly slaked.

LATHING

Metal lath shall be either painted or galvanized. Wood lath shall be of a good grade, free from knots, sap and bark (white pine preferred). Wood lath shall be well dampened shortly before the plaster is applied.

WOOD OR METAL LATH

(Three Coat Work)

SCRATCH COAT—

400 pounds **Best Bros. Keene's "Regular"** (4 sacks of 100 pounds each).
640 pounds stiff, aged lime putty (which can be made from 335 pounds of hydrated lime or 210 pounds of lump lime).
1 bushel good washed hair (6 to 8 pounds).
1 cubic yard clean, sharp sand.

Scratch well and let the wall get hard before applying the second coat. On metal lath more hair must be used, according to the mesh of the lath.

BROWN COAT—

250 pounds **Best Bros. Keene's "Regular"** (2½ sacks of 100 pounds each).
450 pounds stiff, aged lime putty (which can be made from 235 pounds of hydrated lime or 150 pounds of lump lime).
1 cubic yard clean, sharp sand.

This coat must be left under the straight edge and brought to a true and level surface.

FINISH COAT—

Use Smooth Finish or Sand Float Finish. See page 18.

BRICK, CLAY TILE, GYPSUM TILE OR GYPSUM BLOCK

(Two Coat Work)

BROWN OR BASE COAT—

300 pounds **Best Bros. Keene's "Regular"** (3 sacks of 100 pounds each).
450 pounds stiff, aged lime putty (which can be made from 235 pounds of hydrated lime or 150 pounds of lump lime).
1 cubic yard clean, sharp sand.

FINISH COAT—

Use Smooth Finish or Sand Float Finish. See page 18.

CONCRETE WALLS AND CEILINGS

(Two Coat Work)

New concrete must not be plastered until it is dry. All dust and loose particles shall be removed from concrete or cement surfaces by brushing well with a wire brush. The surfaces shall be washed with clean water and kept moist while the plaster is being applied. Should the concrete surfaces be oily or gummy, they must be washed with a 10% solution of muriatic acid and water (one quart of acid to a bucket of water), and washed out with clean water within twenty minutes after the acid solution is applied.

This coat must be laid on with a trowel or wooden float, and not touched again except to knock off the rough edges with the float. Great care must be exercised in applying the base coat to concrete. It must be laid on in one operation and not touched again, for if the coat is moved in any way the bond is broken.

Finish coat should never be applied direct to concrete walls or ceilings.

BROWN OR BASE COAT—

600 pounds **Best Bros. Keene's "Regular"** (6 sacks of 100 pounds each).

480 pounds stiff, aged lime putty (which can be made from 250 pounds of hydrated lime or 160 pounds of lump lime).

1 cubic yard clean, sharp sand.

FINISH COAT—

Use Smooth Finish or Sand Float Finish. See page 18.

Directions for Mixing and Applying

BASE COAT

First mix the **Keene's Cement** in a dry form with an equal amount of sand, then add plenty of clean water. Break up the initial set. Add sand and water to the lime putty, also hair for the scratch coat. Dampen thoroughly, then pull the two piles together, adding sand and water until of the proper consistency and proportions.

If more **Keene's Cement** is required, first mix the same in a **DRY** form with sand, so that it will not become lumpy when added to the mortar.

The mortar should be so stiff as not to drop behind the lath.

Finishes

To Each 100 Square Yards Surface

SMOOTH FINISH

350 pounds **Best Bros. Keene's "Regular"** (3½ sacks of 100 pounds each).

280 pounds stiff, aged lime putty (which can be made from 150 pounds of hydrated lime or 95 pounds of lump lime).

SAND FLOAT FINISH

200 pounds **Best Bros. Keene's "Regular"** (2 sacks of 100 pounds each).

240 pounds stiff, aged lime putty (which can be made from 125 pounds of hydrated lime or 80 pounds of lump lime).

800 lbs. clean, sharp sand.

SMOOTH HARD FINISH

(For Bathroom Wainscoting and similar work)

400 pounds **Best Bros. Keene's "Regular"** (4 sacks of 100 pounds each).

80 pounds stiff, aged lime putty (which can be made from 45 pounds of hydrated lime or 25 pounds of lump lime).

NOTE: If an extra hard, white finish is desired, use **Best Bros. Keene's "Regular"** neat; no lime to be added.

FINISH COAT

Mix the **Keene's Cement** with plenty of clean water. Break up the initial set. Lime may be added if specified, but never in a larger proportion than two parts of lime putty to three of **Keene's Cement.**

Rough on the finish, and ALLOW IT TO SET until a trowel rings when passed over it, then trowel smooth, using as LITTLE WATER as possible. This is important, for if water is used too freely, the finish coat is simply retempered and floated, which does not give the smooth, polished surface that should be obtained with **Keene's Cement.**

Mortar should be applied thin, so as to spread evenly without curling.

Finish should be laid on immediately after the second coat has set, and before suction has commenced. If the brown coat is bone dry, it should be sprinkled with water ahead of the finish.

DO NOT TRY TO WORK OUT ANY SMALL AIRHOLES that may appear when the **Keene's Cement** finish is first applied, as they will all disappear before the final troweling.

By using two boxes, and taking mortar from them alternately, one laborer can mix sufficient finish to keep five or six plasterers busy. The plasterers' time is not taken up in mixing the finish, and they can thus cover one-third more surface than when lime and plaster of paris are used.

IMPORTANT

Do not try to trowel a **Keene's Cement** finish as soon as it is applied. Let it stand for a few minutes—THEN trowel to a hard smooth finish.

Do not throw a **Keene's Cement** mixture away because it starts to SET either in the box or on the board. Add more water and retemper. **YOU CAN'T KILL Best Bros. Keene's Cement.**

Wainscoting in Bathrooms, Kitchens and Corridors

To secure absolute sanitation, the base and cap moulds should first be run in **Best Bros. Keene's Cement "Fine"**, and the space between filled in as in ordinary plastering. It is customary to run the cap mould about 4 feet 6 inches from the floor.

As the wainscoting is the part of the wall most likely to sustain injury from rough usage, it should be as strong as possible, and very little, if any, lime should be used in the finish coat.

When laying off wainscots in imitation of tiling, the finish should be sufficiently hard for the marking tool to cut sharply defined lines without tearing the wall. In the absence of a proper tool, the handle end of a file will often give satisfactory results. As a general rule it is well to wait for twelve or fourteen hours after the plastering is completed before using the marking tool.

Another method is to allow the finish coat to dry out thoroughly, then mark it off into blocks of the required size with a blue pencil, such as carpenters use, making the lines about one-eighth of an inch wide. The work is then finished with two or three coats of a good transparent varnish. The action of the varnish will tend to make the pencil marks appear like tiling mortar.

While the above methods are often followed, a more pleasing and durable effect is obtained by leaving the finish in a smooth state, and not marking it off to represent tiling. A **Keene's Cement** wall is good enough to stand on its own merits without being made in imitation of a less satisfactory material.

Best Bros. Keene's Cement is not waterproof. It will stand more moisture than any other interior plastering material, but where it is desired to wash the walls or wainscoting frequently as in the case of bathrooms, showers, kitchens, hospital operating rooms, etc., the same should be either enameled or given some other surface treatment.

Painting or Enamelling Best Bros. Keene's Cement

If it is desired to give the plastering a decorative or waterproofing treatment, **Best Bros. Keene's Cement** will be found to possess many advantages over ordinary plasters for this purpose.

A **Keene's Cement** wall can and should be painted or enameled as soon as it is thoroughly dry; thus dispensing with the usual delay.

Keene's Cement makes a compact, close-grained surface that forms an ideal base for any kind of decorative work.

There is no free alkali in **Best Bros. Keene's Cement**, and the most delicate colors may be safely applied over it.

If it is desired to size the walls before painting, a primer of varnish, thinned down, will be found satisfactory.

Thousands of dollars' worth of expensive frescoes are ruined yearly through using a cheap plaster of paris and lime finish for the base. For such work, where the plastering is but a small proportion of the total cost, it is true economy to use **Best Bros. Keene's Cement**, which forms a base that is inert, solid and permanent, and will not fade or burn any colors applied over it.

There are many excellent makes of enamel now on the market which are suitable for use over **Best Bros. Keene's Cement**, and the manufacturers of such products will gladly furnish on request full directions for the use of their enamels in connection with **Keene's Cement.**

In general, however, it is safe to say that at least three undercoats should be used, preferably of white lead in oil, although it is quite customary to combine with the lead a certain proportion of zinc, increasing the amount of zinc used with each successive coat.

Undercoats should be allowed sufficient time to dry out thoroughly, and then be lightly sanded with 00 sandpaper. If the undercoats have been properly applied and finished, one finishing coat of white enamel should be sufficient.

Castings

Castings made with **Best Bros. Keene's Cement** possess a strength and richness of texture not obtainable with any other materials. The natural surface of a **Keene's Cement** casting is an egg-shell gloss, but it can be polished to a marble-like lustre if desired. Small plaster moulds can be greased by giving them five or six thin coats of sweet oil, brushed well in. Larger moulds are generally shellaced, then greased with a mixture of stearic acid dissolved in coal oil.

After the **Keene's Cement** has been poured into the mould, it should be left undisturbed until it has set. Shaking the mould while the **Keene's Cement** is still in a liquid form does not drive out the air-bubbles, as some people seem to think, but merely forces them to the face of the casting.

The way to avoid air-bubbles in castings is to mix part of the **Best Bros. Keene's Cement** to the consistency of cream, and then pour in a small amount of this material; tilting the mould so that the **Keene's Cement** covers all the face of the mould with a thin skim of material. Repeat this operation three or four times, then fill the mould with **Best Bros. Keene's Cement** mixed to a thicker consistency.

Castings should preferably be made with **Best Bros. Keene's "Fine"** or **"Quickset"** grades. If the **"Fine"** grade is used, the time of setting may be materially hastened by mixing in about 5 per cent of a freshly calcined, high grade plaster of paris. On no account should more than one part of plaster of paris to twenty parts of **Keene's Cement** be used.

In making castings for Artificial Marble or Caen Stone, it is necessary to mix the material into a fairly stiff paste, which has to be thoroughly pressed and worked into all parts of the mould. When the cast is removed from the mould, any airholes can then be filled in with the same material as was used in making the cast. This filling in should always be done with wooden floats or pointers; steel tools should not be used for the work.

Economy in Using a Power Mixer

On large jobs we recommend the use of a power mixer for mixing the materials required for the base coats. This not only effects a saving in labor, but also thoroughly combines the different ingredients of the mortar.

Difference Between Hydrated and Lump Limes

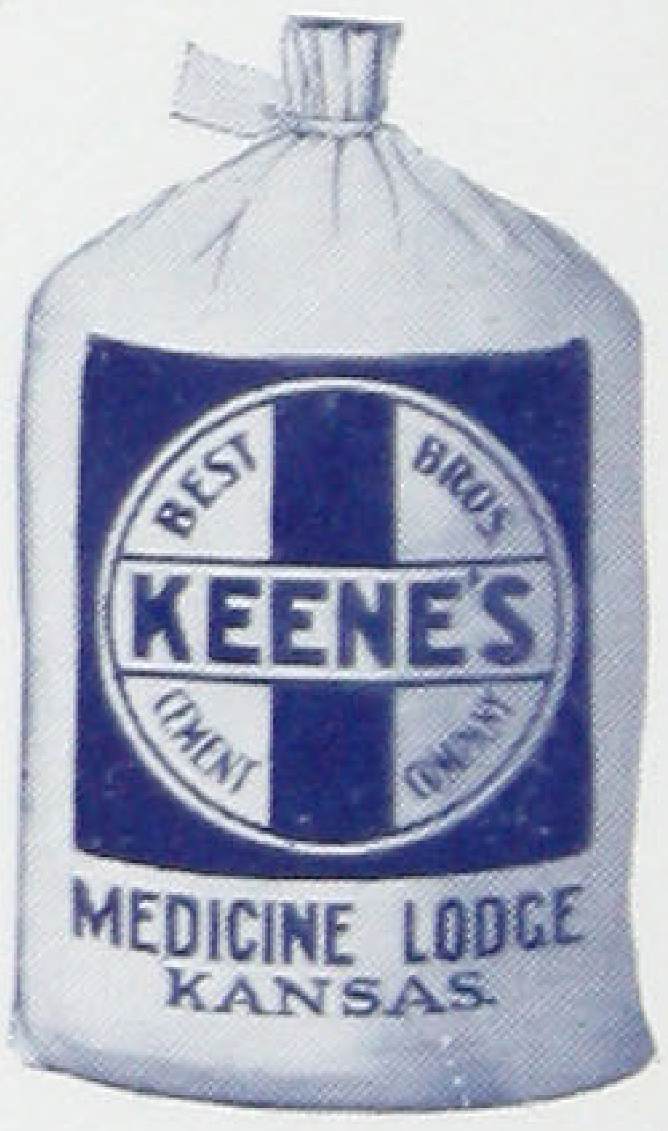
We are frequently asked whether hydrated lime can be used in place of lump lime for mixing with **Best Bros. Keene's Cement.** Lime may be used in either of the above forms, but owing to the variation in the sand-carrying capacity of the different brands of hydrated lime, a contractor should figure on using about 130 lbs. of hydrated lime in place of each 80-lb. bushel of lump lime.

The figures given in the following comparison are taken from an average of tests made on over one hundred of the best known brands of lime on the market. These figures will vary slightly for different kinds of lime, according to chemical composition and efficiency in burning, but for general purposes they are accurate.

100 lbs. Lump Lime		100 lbs. Hydrated Lime
1.43	cu. ft. displacement	2.50
3.70	cu. ft. of putty	2.28
300.36	lbs. of putty	190.15
81.18	weight of 1 cu. ft. of putty in lbs.	83.40
27.00	lbs. needed to make 1 cu. ft. of putty	44.00

While the above table shows that 27 lbs. of lump lime will produce as much putty as 44 lbs. of hydrated lime, when it comes to sand-carrying capacity the best brands of hydrated lime will nearly offset this difference, and, pound for pound, will carry nearly as much sand as the lump lime.

During the past thirty-six years **Best Bros. Keene's Cement** has been used in thousands of buildings, situated in every State in the Union; in Canada, Cuba, Mexico, South America and Japan.



Best Bros. Keene's Cement is never shipped in any form of package except the one shown above.

This is our sack—accept no substitute!